

ADIKAVI NANNAYA UNIVERSITY:: RAJAMAHENDRAVARAM
I BTech (Common to CSE,IT,ECE & EIE wef 2017-18) I Semester
CSEINF101 ENGLISH-1 (MODEL QUESTION PAPER)

Time: 3hrs

Max. Marks: 75

SECTION- A

Answer ALL questions

4x15=60M

1. a) Fill in the blanks with appropriate tense form

5M

1. Both of Ravi's children _____ (jog) every morning.
2. We _____ (make) tea while Shanta is _____ (clean) the house.
3. She _____ (grow) very tired after she had walked five miles.
4. We _____ (meet) him at the theatre at 8PM tonight.
5. You _____ (find) mobile phone in my house I think I left it there.

b) Rewrite the following sentences in Passive Voice

5M

1. My sister broke my parents' favourite lamp.
2. The veteran pitcher threw a ball travelling at incredible speed.
3. Some of the performances amazed us.
4. They gave up the search after three hours.
5. The impatient server cleared the dishes from the table.

c) Change the following sentences from Direct to Indirect Speech

5M

1. "Do you like fish, Mary?" she asked.
2. The boy said, "I couldn't come because of my father's illness."
3. "I am leaving" the sailor said
4. "What are you going to do tomorrow?" she asked me.
5. She said to me, "Don't worry about it."

2. a) Match the following words with appropriate synonyms

5M

- a) Quaint--- 1) travel
- b) Crazy--- 2) strange
- c) Traverse--- 3) mad
- d) Discovered--4) favorable
- e) Congenial-- 5) found

b) Choose the appropriate one word substitute to the following phrases from the words given below

5M

Incorrigible potable eradicate connoisseur illicit

1. A critical judge of any art and craft
2. To get rid of something bad completely _____
3. Impossible to change or improve
4. Not legal or not approved of by society
5. Clean and safe to drink

c) Use the following Idioms in your own sentences.

5M

1. To make ends meet
2. To burn the candle at both ends
3. Gift of the gab
4. Once in a blue moon
5. Bone of contention

3. a) How can the statement "A diseased mind is even more harmful than the disease itself" be explained 15M

(Or)

b) Explain the central theme of the poem "Ozymandias".

4. a) Expand any one of the ideas 5M

1. Make hay while the sun shines
2. A stitch in time saves nine
3. Penny wise and pound foolish

b) Write an essay on any one of the following 10M

1. Population Explosion
2. Role of technology in human life
3. Students' role in empowering nation

SECTION - B

5 a) Rewrite the following sentences as directed 5M

1. He confessed his crime (Simple to Complex)
2. When he was a child, Lincoln did not go to school.(Complex to Simple)
3. The boy was diligent, so the teacher praised him. (Compound to Simple)
4. In spite of his popularity, he cannot be considered as a great writer. (Simple to Compound)
5. Buy two shirts and get one free. (Compound to Complex)

b) Write a paragraph on any one of the following 5M

1. My first day at the University
2. What I know about Ocean
3. My favorite book
4. Games people play

c) Rewrite the following sentences using question tags 5M

1. It is not dark.
2. Pavan has not kept his word.
3. They were going to the lake
4. You are trying to find someone.
5. The bread will become soggy.

ADIKAVI NANNAYA UNIVERSITY:: RAJAMAHENDRAVARAM

I BTech (Common to CSE,IT,ECE & EIE wef 2017-18) I Semester

CSEINF102 MATHEMATICS-1 (MODEL QUESTION PAPER)

Time: 3hrs

Max. Marks: 75

SECTION- A

Answer ALL questions

4x15=60M

- 1 a) Show that the functions $u = xy + yz + zx$, $v = x^2 + y^2 + z^2$ and $w = x + y + z$ are functionally related. Find the relation between them. (7M)
- b) If z is a homogeneous function of degree n in x and, show that
- $$x^2 \frac{\partial^2 z}{\partial x^2} + 2xy \frac{\partial^2 z}{\partial x \partial y} + y^2 \frac{\partial^2 z}{\partial y^2} = n(n-1) \quad (8M)$$
- (OR)
- c) If $u = f(r)$ and $x = r \cos \theta$, $y = r \sin \theta$, prove that $\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} = f''(r) + \frac{1}{r} f'(r)$ (7M)
- d) Find the equations of the tangent plane and the normal to the surface $z^2 = u(1 + x^2 + y^2)$ at $(2,2,6)$. (8M)
- 2 a) Expand the function $f(x, y) = e^x \log(1 + y)$ in terms of x and y upto the terms of 3rd degree using Taylor's theorem (7M)
- b) Find the volume of the greatest rectangular parallelepiped that can be inscribed in the ellipsoid
- $$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1 \quad (8M)$$
- (OR)
- c) A rectangular box open at the top is to have volume of 32 cubic ft. Find the dimensions of the box requiring least material for its construction. (7M)
- d) By Successive differentiation if $\int_0^1 x^m dx = \frac{1}{m+1}$ w.r.t 'm' evaluate $\int_0^1 x^m (\log x)^n dx$ (8M)
- 3 a) Solve $(x^2 y^2 + 2)dx + x(2 - 2x^2 y^2)dy = 0$ (7M)
- b) Solve $(1 + y^2) + (x - e^{\tan^{-1} y}) \frac{dy}{dx} = 0$ (8M)
- (OR)
- c) Solve $(x + 1) \frac{dy}{dx} - xy = e^x (x + 1)^{n+1}$ (7M)
- d) Solve $(xy^3 + y)dx + 2(x^2 y^2 + x + y^4)dy = 0$. (8M)
- 4 a) If the temperature of a body is changing from 100°C to 70°C in 15 mts, find when the temperature will be 40°C , if the temp of the air is 30°C . (7M)
- b) Solve $(D^2 - 5D + 6)y = e^x \sin x$ (8M)
- (OR)
- c) The number N of bacteria in a culture grew at a rate proportional to N . The value of N was initially 100 and increased to 332 in one hour. What would be the value of N after $1\frac{1}{2}$ hour? (7M)
- d) Solve $(D^2 + a^2)y = \tan ax$, by the method of variation of parameters. (8M)

SECTION– B**Answer any FIVE questions****5x3=15M**

- a. Find the first and second partial derivatives of $z = x^3 + y^3 - 3axy$
- b. If $u = x \log(xy)$ where $x^3 + y^3 + 3xy = 1$, find $\frac{du}{dx}$
- c. The period of a simple pendulum is $= 2\pi \sqrt{\frac{l}{g}}$, find the maximum error in T due to the possible error upto 1% in l and 2.5% in g .
- d. If $u = x^2 - y^2$, $v = 2xy$ and $x = r \cos \theta$, $y = r \sin \theta$ find $\frac{\partial(u,v)}{\partial(r,\theta)}$
- e. Solve $(2x - y + 1)dx + (2y - x - 1)dy = 0$
- f. Solve $xdy + ydx + \frac{xdy - ydx}{x^2 + y^2} = 0$
- g. Find the particular value of $\frac{1}{(D-2)(D-3)} e^{2x}$
- h. Solve $(D^2 + D + 1)y = 0$

ADIKAVI NANNAYA UNIVERSITY:: RAJAMAHENDRAVARAM
I BTech (Common to CSE,IT,ECE & EIE wef 2017-18) I Semester
CSEINF103 COMPUTER PROGRAMMING AND NUMERICAL METHODS
(MODEL QUESTION PAPER)

Time: 3hrs

Max. Marks: 75

SECTION- A

Answer ALL questions

4x15=60M

- 1 a) Explain the basic structure of C program. [5M]
b) Explain formatted input and output Statements with an example. [10M]
(OR)
c) Explain about Control Statements and implement a program to find given number is palindrome or not? [7M]
d) Define Two Dimensional Array? How to initialize two dimensional array and write a C Program to find multiplication of two matrices. [8M]
- 2 a) Define a function and explain different categories of functions with an example. [7M]
b) Explain about Parameter Passing techniques and implement a program to find swapping of two numbers by using call by reference method. [8M]
(OR)
c) Define a Pointer & write a C program to compute sum of all elements in array [7M]
d) Explain the concept of pointers as function arguments with an Example. [8M]
- 3 a) Define a Structure and write a C program to display the student details by using arrays of structures. [7M]
b) Write a C program to display the employee details by using structure with in a structure. [8M]
(OR)
c) What is file? How to create a file? Describe the different file operations. [8M]
d) Write a programme to copy one file to another file. [7M]
- 4 a) Find the root of the following equation using Newton Raphson method, correct the result upto 3 decimal places $x^3-3x-5=0$. [7M]
b) Evaluate using Simpson's Rule $\int_{-2}^2 x \sin(x) dx$ [8M]
(OR)
c) Explain Simpson's $1/3$ rd rule for numerical integration [8M]
d) Explain Trapezoidal rule for numerical integration. [7M]

SECTION- B

Answer any FIVE questions

5x3=15M

- a. Explain operators in C
- b. Explain any three string handling functions in C
- c. Explain recursive function with an example.
- d. Explain the concept of chain of pointers with an example.
- e. What are the differences between structures and unions in C
- f. Explain command line arguments in C
- g. Explain about Euler's Method.
- h. Explain about R-K Method.

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I BTech (Common to CSE & IT wef 2017-18) I Semester

CSEINF104 PHYSICS (MODEL QUESTION PAPER)

Time: 3hrs

Max. Marks: 75

SECTION- A

Answer ALL questions

4x15=60M

- 1 a) Explain the working of Carnot's heat engine; obtain an expression for its efficiency [10M]
b) State and explain first law of thermodynamics [5M]
(OR)
c) Describe the reversible and irreversible process [10M]
d) Explain about entropy. [5M]
- 2 a) Discuss the growth and decay of current in L-R Circuit. [10M]
b) Explain about Lenz's Law [5M]
(OR)
c) Explain what is Hall Effect and its importance [10M]
d) Write a short note on Farady's law of induction [5M]
- 3 a) What is inference? Obtain the conditions for the inference of light reflected by a thin parallel film. [10M]
b) In Newton's rings experiment the diameter of 10th dark ring is 0.433 cm. Find the wavelength of incident light, if the radius of curvature of lens is 70 cm. [5M]
(OR)
c) What is polarization? State and explain Brewster's law. [7M]
d) How do you distinguish between a Quarter wave plate and a Half wave plate. [8M]
- 4 a) With neat diagrams, describe the principle, construction and working of Gas laser. [10M]
b) Give short note on stimulated emission [5M]
(OR)
c) What is Magnetostriction effect? Explain how ultrasonic's can be generated by piezoelectric phenomena [10M]
d) Explain acceptance angle and numerical aperture [5M]

SECTION- B

Answer any FIVE questions

5x3=15M

- a. Explain the second law of thermodynamics
b. Calculate the efficiency of a reversible heat engine
(i) working between 72^o C and 187^o C (ii) working between 32^o C and 127^o C
c. Give some applications of Gauss's law
d. Explain magnetic force on current
e. Describe the arrangement of Newton's rings experiment.
f. Explain Nicol's prism.
g. Applications of optical fibre communication system .
h. Define Ultrasonics ? Give some advantages of ultrasonic waves.

ADIKAVI NANNAYA UNIVERSITY:: RAJAMAHENDRAVARAM
I BTech (Common to CSE & IT wef 2017-18) I Semester
CSEINF105 ENGINEERING DRAWING (MODEL QUESTION PAPER)
Time: 3hrs **Max. Marks: 75**

SECTION- A

Answer ALL questions

4x15=60M

- 1 a) The headlight reflector of a four-wheeler has a maximum rim diameter of 115 mm and a Maximum depth of 90 mm .Draw the Shape of the reflector. Draw a tangent and normal at any point on the curve. [10M]
- b) Inscribe a regular pentagon in a circle of 70mm diameter [5M]
(OR)
- c) The distance between two fixed points is 90mm. A point P moves such that the difference of its distances from two fixed points always remains constant and is equal to 60 mm. Draw the loci of P. Draw the tangent and normal at any point on the hyperbola. [10M]
- d) Super scribe/Describe/Circumscribe an equilateral triangle about a circle of 50 mm diameter. [5M]
- 2 a) Construct a Vernier scale of RF= 1: 25 to show decimeters, centimeters and millimeters. The scale should be capable of reading up to 4 decimeters Mark on your scale the following distances: (a) 3.23 dm and (b) 3.65 dm [10M]
- b) Draw the projections of the following, keeping the distance between the projectors as 25mm on the same reference line:
 - (i) A- 25mm above HP and 50mm behind the VP.
 - (ii) B- 40 mm below HP and 45mm in front of the VP.
 - (iii) C- on HP and 25mm behind VP. [5M](OR)
- c) A motor car is running at a speed of 60 kph. On a scale of RF = 1 / 4,00,000 show the distance travelled by car in 47 minutes. [10M]
- d) A line CD 30 mm long is parallel to both the planes. The line is 40 mm above HP and 25 mm in front of Vertical Plane. Draw its Projections. [5M]
- 3 a) Draw the projections of a cone, bse 30 mm diameter and axis 50 mm long, resting on HP on a point of its base circle with
 - i. (A) the axis making an angle of 45° with HP and its top view making an angle of 30° with VP and [7M]
 - ii. (B) The axis making 45° with HP and 30° with VP. [8M](OR)
- b) A right hexagonal prism of side of base 24 mm and axis 56 mm long is lying on one of the corners of the base. Its axis is inclined an angle of 30° to HP. Draw the isometric projection of the solid. [15M]
- 4 a) The front view and top view of a straight line PQ measures 50mm and 65 mm respectively. The point P is in the HP and 20 mm in front of the VP and the front view

of the line is inclined at 45° to the reference line. Determine the true length of PQ, true angles of inclination with the reference planes and the trace. [8M]

- b) A thin rectangular plate of sides 50mm x 25mm has its shorter side in HP and inclined at an angle of 30° to the VP. Project its front view when its top view is a Perfect Square of 25mm side [7M]

(OR)

- c) Draw the Projections of a line PQ 100 mm long inclined at 30° to HP and 45° to VP. Point P is 20 mm above HP and in VP. Also determine the apparent lengths and inclinations. [8M]
- d) An isosceles triangular lamina has base 40 mm long and altitude 56 mm. It is so placed on Vertical Plane such that in the front view it is seen as an equilateral triangle of 40mm sides with the side that is contained in Vertical Plane is inclined at 45° to Horizontal Plane. Draw its Top View and front views. Also find the inclination of the lamina to Vertical Plane [7M]

SECTION– B

Answer any FIVE questions

5x3=15M

- a. What is representative fraction?
- b. Define the term horizontal trace.
- c. What is meant by oblique plane?
- d. Define the term apparent angles of inclination in the projection of straight lines.
- e. What do you understand by a “Right Regular Prism”
- f. What is the difference between right and oblique solids?
- g. Define the terms: Isometric axes, Isometric Planes
- h. Define first angle projection.

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CSEINF106 PROFESSIONAL ETHICS AND MORAL VALUES
(MODEL QUESTION PAPER)

Time: 3hrs

Max. Marks: 75

SECTION- A

Answer ALL questions

4x15=60M

- 1 a) Discuss the need for value education and enumerate its content. [7]
b) Critically evaluate the process of self-exploration. [8]
(OR)
c) Define ethics and give an account on ethical vision. [7]
d) Explain in detail the classification of human values. [8]
- 2 a) Elucidate the nature of ethics for engineering profession. [8]
b) Give a note on code of ethics with specific reference to CSI. [7]
(OR)
c) Write briefly about engineering as social experimentation. [7]
d) Explain the role of engineers in promoting ethical climate. [8]
- 3 a) Discuss the moral responsibility of engineers towards safety. [8]
b) Explain the Fukushima nuclear disaster with the ethical issues involved. [7]
(OR)
c) Enlist the rights of a professional. [7]
d) Trace the importance of having regulatory criteria for a balanced outlook on law. [8]
- 4 a) Define the concept of globalization and explain the role of MNCs in India. [8]
b) Discuss the importance of environmental ethics. [7]
(OR)
c) Critically classify cybercrimes with relevant examples. [8]
d) Discuss the concept of harmony in life. [7]

SECTION- B

Answer any FIVE questions

5x3=15M

- 5.
- a. Introspection
 - b. Ethical decisions
 - c. Professionalism
 - d. Engineers as leaders
 - e. Chernobyl disaster
 - f. Gender discrimination
 - g. Computer ethics
 - h. Ethical living